ENERGY STAR

ENERGY STAR® FOR WINDOWS, DOORS, AND SKYLIGHTS

COST & ENERGY SAVINGS ESTIMATES FOR ENERGY STAR QUALIFIED WINDOWS

ESTIMATED ANNUAL SAVINGS: U.S. CITIES

	Relative to Single Pane		Relative to Typical Alternative			
			Replacement		New Construction	
CITY	Utility Dollars	Btu (millions)	Utility Dollars	Btu (millions)	Utility Dollars	Btu (millions)
AK, Anchorage	$270	54	$40	7.6	$40	7.8
AK, Fairbanks	$350	69	$50	9.4	$60	11.3
AL, Birmingham	$240	14.8	$35	1.8	$35	1.8
AL, Mobile	$120	6.2	$35	0.8	$35	0.7
AR, Little Rock	$275	18	$40	2.2	$45	2.3
AZ, Phoenix	$275	12.9	$70	2.7	$80	3.1
AZ, Flagstaff	$410	28.6	$20	1.1	$20	1.2
AZ, Tucson	$245	12.7	$50	1.9	$60	2.2
CA, Fresno	$225	15.1	$50	1.9	$60	2.1
CA, Los Angeles [1,2]	$70	5.9	$5	-0.1	$10	-0.2
CA, Red Bluff	$265	19	$55	2.4	$65	2.8
CA, San Diego	$70	4.8	$10	0.2	$15	0.2
CA, San Francisco [2]	$120	12.8	($5)	-0.6	($10)	-1.2
CA, Arcata [2]	$160	17.6	$0	-0.3	($5)	-0.6
CA, Bakersfield	$215	12.7	$50	1.5	$60	2.0
CA, Daggett	$255	13.3	$60	1.6	$70	1.8
CA, Sacramento	$195	15.1	$35	1.4	$40	1.5
CO, Denver	$305	30.2	$35	2.7	$40	2.8
CO, Grand Junction	$295	27.5	$40	2.8	$45	3.0
CT, Hartford	$365	23.3	$75	4.0	$80	4.3
DC, Washington	$405	27.5	$55	3.1	$60	3.3
DE, Wilmington	$440	28.1	$55	3.1	$60	3.2
FL, Jacksonville	$150	6.3	$50	1.6	$53	1.5
FL, Miami	$165	6.3	$115	4.4	$130	4.8
FL, Daytona Beach	$135	5.5	$65	2.2	$70	2.3
FL, Tallahassee	$145	6.1	$40	1.1	$40	1.0
FL, Tampa	$155	6.2	$85	2.9	$90	3.1

CITY	Utility Dollars	Btu (millions)	Utility Dollars	Btu (millions)	Utility Dollars	Btu (millions)
GA, Atlanta	$295	16.9	$40	1.9	$40	2.0
GA, Savannah	$225	12.3	$40	1.7	$40	1.9
IA, Des Moines	$320	25	$70	4.6	$70	4.8
ID, Boise	$300	31.7	$35	3.4	$40	3.6
IL, Chicago	$285	25.1	$60	4.7	$65	5.0
IL, Springfield	$275	23.2	$60	4.3	$65	4.5
IN, Indianapolis	$250	21.9	$55	4.0	$55	4.2
KS, Wichita	$265	20	$55	3.4	$60	3.6
KY, Lexington	$355	26.8	$50	3.4	$50	3.4
KY, Louisville	$320	24	$45	3.1	$45	3.1
LA, Lake Charles	$140	7.5	$55	1.7	$60	1.7
LA, New Orleans	$120	6.2	$50	1.5	$55	1.4
LA, Shreveport	$210	13.8	$40	2.0	$45	2.1
MA, Boston	$335	23	$60	3.6	$60	3.6
MD, Baltimore	$435	27.1	$50	2.9	$55	3.0
ME, Portland	$320	24.9	$55	3.7	$55	3.6
MI, Detroit	$240	26	$50	4.7	$50	4.9
MI, Grand Rapids	$250	27.4	$55	5.2	$55	5.4
MI, Houghton	$280	31	$60	5.9	$55	5.9
MN, Minneapolis	$310	29.9	$65	5.6	$70	5.8
MN, Duluth	$370	37	$75	7.0	$70	6.7
MO, Kansas City	$265	20.5	$60	3.8	$60	4.0
MO, St. Louis	$265	20.5	$60	3.8	$60	4.0
MS, Jackson	$205	14.7	$40	2.0	$40	2.1
MT, Great Falls	$440	44.2	$55	5.2	$60	5.2
MT, Billings	$425	41.8	$55	4.7	$55	4.8
NC, Raleigh	$280	18.8	$40	2.1	$40	1.9
ND, Bismarck	$300	32.1	$60	6.0	$65	6.1
NE, Omaha	$245	23.6	$55	4.4	$55	4.6
NH, Concord	$345	25	$70	4.2	$70	4.3
NJ, Atlantic City	$240	18.6	$50	2.8	$50	2.7
NM, Albuquerque	$250	20.2	$30	1.4	$35	1.5
NV, Las Vegas	$260	15	$55	1.7	$60	2.0
NV, Reno	$275	23.5	$30	1.7	$35	1.8
NY, Buffalo	$365	26.7	$80	5.2	$85	5.3
NY, New York	$290	20	$65	3.3	$65	3.4
NY, Albany	$355	25.7	$80	4.8	$80	4.9

CITY	Utility Dollars	Btu (millions)	Utility Dollars	Btu (millions)	Utility Dollars	Btu (millions)
OH, Dayton	$260	22.9	$55	4.1	$60	4.4
OH, Cleveland	$275	24	$60	4.7	$60	4.8
OK, Oklahoma City	$290	22.2	$40	2.4	$40	2.4
OR, Medford	$270	23.6	$40	3.0	$40	2.9
OR, Portland	$265	24.6	$35	2.9	$35	2.7
PA, Philadelphia	$285	19.6	$60	3.3	$60	3.5
PA, Pittsburgh	$325	22.7	$70	4.3	$75	4.6
PA, Williamsport	$320	22.3	$65	4.1	$70	4.2
RI, Providence	$310	22.5	$55	3.4	$60	3.5
SC, Charleston	$210	13.3	$35	1.6	$35	1.5
SC, Greenville	$250	16.9	$35	1.9	$35	1.7
SD, Pierre	$305	27.9	$60	4.9	$65	5.1
TN, Memphis	$235	17.8	$40	2.3	$40	2.1
TN, Nashville	$280	22.5	$45	3.0	$45	2.9
TX, Brownsville	$185	7.6	$110	3.7	$120	4.1
TX, El Paso	$230	13.9	$40	1.5	$50	1.7
TX, Fort Worth	$245	14.9	$50	1.9	$55	2.1
TX, San Antonio	$170	7.9	$80	2.0	$85	2.2
TX, Houston	$160	7.5	$75	2.2	$85	2.3
TX, Lubbock	$280	19.8	$40	1.8	$40	1.9
UT, Salt Lake City	$275	29.7	$40	3.3	$45	3.5
UT, Cedar City	$250	27.8	$30	2.3	$30	2.4
VA, Richmond	$385	21.7	$45	2.2	$50	2.3
VT, Burlington	$330	28.2	$70	5.2	$70	5.2
WA, Seattle	$355	27.6	$20	2.9	$30	2.9
WA, Spokane	$350	37.5	$45	4.3	$45	4.4
WI, Madison	$295	27.4	$60	5.0	$65	5.1
WV, Charleston	$290	24.2	$35	2.7	$40	3.1
WY, Cheyenne	$340	41.4	$40	3.7	$40	3.7

U.S. Department of Energy (2005)

ASSUMPTIONS

Relative to Single Pane: Savings estimates based on average annual energy use for a 2,000 sq. ft., single story, detached house with 15% glazing, gas heat and electric air conditioning. Estimates use state average utility rates. Actual savings will vary by home characteristics.

Relative to Typical Alternative: Savings estimates based on average annual energy use for a 2,000 sq. ft., single story, detached house with 15% glazing, gas heat and electric air conditioning. Estimates use state average utility rates. The typical alternative (clear glass, double pane) may not be applicable to all jurisdictions due to mandatory building codes. Actual savings will vary by home characteristics.

For full assumptions and methodology visit: www.energystar.gov/windows.

END NOTES

[1] Anomalies such as negative savings (costs) occur when the cooling energy savings from ENERGY STAR qualified windows are less than the heating energy penalty, resulting in slightly greater average energy use than double clear windows.

[2] Negative energy savings (increased energy use) and positive dollar savings occur simultaneously because electric cooling costs per Btu in August 2004 in California were more than three times those for gas heating per Btu. The greater savings per Btu of electricity outweigh the increased heating costs leading to overall monetary savings.